

Form PTO-1449 (Rev. 7-50)  
U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

Sheet 1 of 4



Applicants : Eddie L. Chang; Alok Singh; Qin Lu and Christopher Hartshorn  
Serial No. : Unknown  
Filed : Herewith  
For : IMMOBILIZED METALCHELATER COMPLEXES FOR CATALYSIS  
AND DECONTAMINATION OF PESTICIDES AND CHEMICAL  
WARFARE NERVE-AGENTS

**LIST OF REFERENCES CITED BY APPLICANT**

**U.S. PATENT REFERENCES**

Examiner Initial	Ref	Document Number	Date	Name
<i>JP</i>	AA	5,169,554	12/8/92	Akkara, et al.
<i>JP</i>	AB	5,928,927	7/27/99	Cheng, et al.
<i>JP</i>	AC	5,695,750	12/9/97	Doctor, et al.
<i>JP</i>	AD	4,851,124	7/25/89	Vandegrift et al.
<i>JP</i>	AE	5,710,358	1/20/98	Yang, et al.
<i>JP</i>	AF	5,678,243	10/14/97	Yang, et al.
<i>JP</i>	AG	5,632,904	5/27/97	Samad, et al.
<i>JP</i>	AH	4,180,557	12/25/79	Praxl, et al.
<i>JP</i>	AI	4,263,305	4/21/81	Epstein, et al.
<i>JP</i>	AJ	5,907,035	5/25/99	Guinn
<i>JP</i>	AK	5,100,477	3/31/92	Chromeczek et al.
<i>JP</i>	AL	6,046,375	4/4/00	Goodell et al.
<i>JP</i>	AM	5,434,331	7/18/95	Barkatt et al.
	AN	Navy Case No. 78,974		

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*What is this?*

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*10/1/03*

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**FOREIGN PATENT APPLICATIONS**

None

**OTHER PRIOR ART (including Author, Title, Date, Pages)**

Examiner Initial	Ref	Author, Title, Date, Pages, etc.
<u>JP</u>	BA	F.M. Menger and T. Tsuno, <i>Organic Reactions Catalyzed by Copper-Loaded Polymers, Reactivity vs Polymer Structure</i> , Pp. 4903-4907, 1989. <u>J. Am. Chem. Soc. vol. 111</u>
<u>JP</u>	BB	Philip S. Hammond and Jeffry S. Forster, <i>A Polymeric Amine-Copper(II) Complex as Catalyst for the Hydrolysis of 1,2,2-Trimethylpropyl Methylphosphonofluoridate (Soman) and Bis (1-methylethyl) phosphorofluoridate (DFP)</i> , Pp. 1925-1931, 1991. <u>J. Applied Polymer Sci. vol. 43</u>
<u>JP</u>	BC	Masayuki Kato, Hiroyuki Nishide, Eishun Tsuchida, <i>Complexation of Metal Ion with Poly (1-Vinylimidazole) Resin Prepared by Radiation-Induced Polymerization with Template Metal Ion</i> , Pp. 1803-1809, 1981. <u>J. Polymer Science: Polymer Chem. Ed. vol. 19</u>

Pasterczyk

10/7/02

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JP	BD	Robert A. Moss and Kaliappa G. Ragunathan, <i>Metal Micelle Mediated Hydrolysis of Phosphonic Acid Esters</i> , Pp. 107-110, 1999.
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JP	BE	Robert A. Moss, Jing Zhang and Kathryn Bracken, <i>Extraordinary Acceleration of Phosphodiester Hydrolyses by Thorium Cations</i> , Pp. 1639-1640, 1997.
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JP	BF	Kathryn Bracken, Robert A. Moss and Kaliappa G. Ragunathan, <i>Remarkably Rapid Cleavage of a Model Phosphodiester by Complexed Ceric Ions in Aqueous Micellar Solutions</i> , Pp. 9323-9324, 1997.
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	BG	T. Wagner-Jauregg, B.E. Hackley, Jr., T.A. Lies, O.O. Owens and R. Proper, <i>Model Reactions of Phosphorus-containing Enzyme Inactivators. IV. The Catalytic Activity of Certain Metal Salts and Chelates in the Hydrolysis of Diisopropyl Fluorophosphate</i> , Pp. 922-929, 1954.
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What journal  
A volume is this?  
Please cite properly

JP	BH	Keith E. LeJeune, Anita J. Mesiano, Samuel B. Bower, Janet K. Grimsley, James R. Wild, Alan J. Russell, <i>Dramatically Stabilized Phosphotriesterase-Polymers for Nerve Agent Degradation</i> , Pp. 105-114, 1997.
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Biototechnology & Bioengineering, vol. 54, no. 21

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Examiner Initial	Ref	Author, Title, Date, Pages, etc.
<u>JP</u>	BI	Jean M. Smolen and Alan T. Stone, <i>Divalent Metal Ion-Catalyzed Hydrolysis of Phosphorothionate Ester Pesticides and Their Corresponding Oxonates</i> , Pp. 1664-1673, 1997. ( <i>Environ. Sci. Technol.</i> vol. 31)
<u>JP</u>	BJ	Yu-Chu Yang, James A. Baker and J. Richard Ward, <i>Decontamination of Chemical Warfare Agents</i> , Pp. 1729-1743, 1992. ( <i>Chem. Rev.</i> vol. 92)
_____	BK	<del>Richard L. Gustafson, Stanley Chaberek, Jr. and Arthur E. Martell, <i>Kinetic Study of the Copper(II) Chelate Catalyzed Hydrolysis of Diisopropyl Phosphorofluoridate</i>, Pp. 598-601, 1962.</del> <i>Environ. Sci. Technol.</i> vol. 31
_____	BL	<del>R.C. Courtney, R.L. Gustafson, S.J. Westerback, H. Hyytiainen, S.C. Chaberek, Jr., and A.E. Martell, <i>Metal Chelate Compounds as Catalysts in the Hydrolysis of Isopropyl Methylphosphonofluoridate and Diisopropylphosphorofluoridate</i>, Pp. 3030-3036, 1956.</del> <i>Chem. Rev.</i> vol. 92
_____	BM	<del>Singh, et al., <i>Incorporation of Nano-particle Sites in Polymer Matrix by Metal Ion Imprinting</i>, <i>Mat. Res. Soc. Symp. Proc.</i>, Vol. 501, Material Research Society, 1998, pp. 199-207.</del> <i>Chem. Rev.</i> vol. 92

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